

SCIENTIFIC NOTE

***Meconema thalassinum* (Orthoptera: Tettigoniidae),
a foreign katydid established in British Columbia****ROBERT A. CANNINGS¹, JAMES W. MISKELLY², CATRIEN A.H. SCHIFFER³, KAR LUN ALAN LAU⁴ and KAREN M. NEEDHAM⁴**

Meconema thalassinum (De Geer), a katydid in the tettigoniid subfamily Meconematinae, is a European native established in northeastern North America since 1957 (Capinera *et al.* 2004). In the published literature it is known as far west as Michigan and extreme southwestern Ontario (Marshall *et al.* 2004).

Rather than stridulating by rubbing the forewings together, as most Ensifera do, males call at night by tapping their hind tarsi on leaf surfaces or other substrates, and thus *M. thalassinum* is known in North America as the Drumming Katydid. The drumming is quiet, but sometimes may be heard 3 to 4 m away (Capinera *et al.* 2004). The species is pale green with a dorsal yellow stripe on the head and prothorax. Adults range from 14 to 20 mm in length; both sexes are fully winged and have an exposed tympanum on each fore tibia. The female has a curved ovipositor as long as the abdomen (Fig. 1a); the male's subgenital plate is bifid, long and strongly up-curved (Fig. 1b). *Meconema thalassinum* lives mainly in deciduous trees and is mostly nocturnal; it eats insects as well as leaves (Johnstone 1970).

Although there are recent photographs posted on the Internet (BugGuide 2007) from southwestern British Columbia and one from King County, Washington, this paper documents the earliest western North American records of *M. thalassinum* and the subfamily Meconomatinae. They come

from the Lower Mainland region of southwestern British Columbia (from the Greater Vancouver area east to Maple Ridge and Langley) between 1991 and 2007 (Collections deposited in RBCM – Royal British Columbia Museum, Victoria, BC; SFU – Simon Fraser University collection, Burnaby, BC; UBC – Spencer Entomological Museum, University of BC, Vancouver, BC). Most specimens (25 of 31) were collected by entomology students for class projects at Simon Fraser University and the University of British Columbia. The earliest records are from Surrey (16 September 1991, J. Mayer (SFU)) and Haney (22 September 1991, S. Chaabra (SFU)).

David Holden (pers. comm.), trapping Gypsy Moths with pheromone-baited delta traps, has found numerous *Meconema* specimens in the Vancouver and Lower Fraser Valley areas; the insects are apparently entering the traps for shelter or to eat dead insects trapped there. At 133 Powell Street in downtown Vancouver, Bruce Triggs captured a male in his apartment on 9 August 2006 (RBCM). Catrien Schiffer has observed the species for three years at her home on Puget Drive in Vancouver, a locality dominated by large trees and gardens. On 29 July 2005 a female appeared above the front door and both a male and female were seen there intermittently over the next two weeks. A male perched at the same place from 20 July 2006 until mid-August, when it was found dead (Fig. 1b)

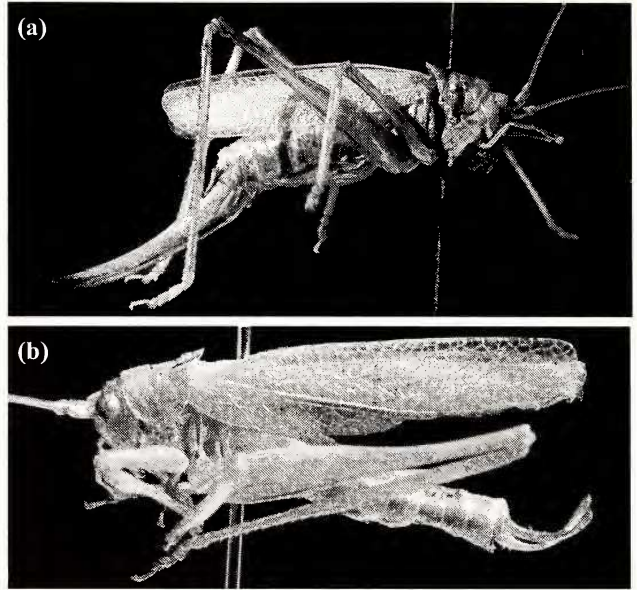
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Figure 1. *Meconema thalassinum*. (a) Female. Vancouver, 5 September 2006, Murray Isman (Spencer Entomological Museum). (b) Male. Vancouver, 4015 Puget Drive, found dead, 19 August 2006, Catrien A.H. Schiffer (Royal BC Museum). Photos: Darren Copley.



(RBCM). Two females died in this garden in August (RBCM) and a third was photographed in September 2006. In 2007, both males and females were observed there between 8 August and 2 November. The closely timed appearance of adults at the same location in three consecutive years indicates that, although no courtship or mating behaviour has been observed at the site, breeding is occurring in the area.

Meconema thalassinum is clearly well established in the Vancouver and Lower Fraser Valley region of British Columbia and there is one photographic record from Issaquah, King County, Washington taken in August 2007 (BugGuide 2007). As far as is known, the Lower Mainland of BC is the only region west of Michigan where this exotic species is established. Whether this population is the result of specimens transported west from eastern North America, or if the founders came directly from Europe, is unknown. Vancouver is a major air, sea

and land transportation hub and many routes for the immigration of *Meconema* are available. Its small size, attraction to human habitations and propensity for hiding in small spaces suggests that it may be an efficient traveller in human cargo. Although it has spread only slowly between New York and Michigan in the 50 years since its initial North American introduction, it appeared frequently in Toronto in 2007 (Steve Marshall, pers. comm.). The species feeds on a wide variety of deciduous trees and shrubs, but it has never been considered a pest in its native Europe or in eastern North America and it is unlikely to become one in British Columbia.

We thank Murray Isman and Yasmin Akhtar (University of BC), David Holden (Canadian Food Inspection Agency, Burnaby, BC), Steve Halford (Simon Fraser University), Bruce Triggs (Vancouver) and Steve Marshall (University of Guelph) for specimens and information.

REFERENCES

- BugGuide. 2007. *Meconema thalassinum*. <http://bugguide.net/node/view/8022/bgimage>.
- Capinera, J.L., R.D. Scott and T.J. Walker. 2004. Field guide to grasshoppers, katydids and crickets of the United States. Cornell University Press, Ithaca, NY.
- Johnstone, D.E. 1970. Notes on the palaearctic grasshopper, *Meconema thalassinum* (De Geer), (Orthoptera: Tettigoniidae: Meconematinae) established in Long Island, New York. *Entomological News* 81: 62-65.
- Marshall, S.A., S.M. Paiero and O. Lonsdale. 2004. New records of Orthoptera from Canada and Ontario. *Journal of the Entomological Society of Ontario* 135: 101-107.